

Appl. No. 10/048,084  
Atty. Docket No. AA414M  
Amdt. dated September 17, 2003  
Reply to Office Action of March 17, 2003

### REMARKS

Claims 1 - 14 are pending in the present application. Appropriate claim fees have been provided.

The specification has been amended on page 1, first paragraph, in order to contain a specific reference to the prior application to which the present application is claiming benefit of priority.

Claims 1, 2, 3 have been amended to more specifically characterize the present invention. Claim 1 has been amended to incorporate the matter of Claim 4. Claim 2 has been amended to incorporate the matter of Claim 5. Claim 3 has been amended to incorporate the matter of Claim 7. Support for such amendments is found in the claims, as originally filed. Further discussion regarding these claim amendments has been incorporated into the remarks to follow.

The Examiner has issued an objection of the oath or declaration, requiring a new oath or declaration in compliance with 37 CFR 1.67(a) identifying the application by application and filing date being required. The Examiner has stated that the oath or declaration is defective because it claims the benefit under 35 U.S.C. (119)(c) to PCT/US00/20662 application and identifies this application as a US provisional application. Further, the PCT/US00/20662 application claims priority to PCT/US99/17163 application. The Examiner has stated that the instant declaration does not claim priority to the latter application. Applicants herein submit an Application Data Sheet with the necessary corrections included, as described above.

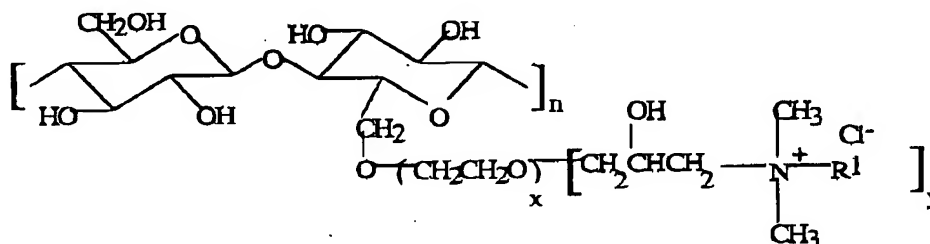
It is believed these changes do not involve any introduction of new matter. Consequently, entry of these changes is believed to be in order and is respectfully requested.

### Invention Synopsis

The present application discloses a hair conditioning composition comprising by weight: from about 0.001% to about 2% of a hydrophobically modified cellulose ether comprising a hydrophilic cellulose backbone and a hydrophobic substitution group; the hydrophilic cellulose backbone being water soluble and selected from the group consisting of methyl cellulose, hydroxymethyl cellulose, hydroxyethyl cellulose, hydroxyethyl ethylcellulose, hydroxypropyl cellulose, hydroxypropyl methylcellulose, hydroxybutyl cellulose, and mixtures thereof; and having grafted thereto the hydrophobic substitution group to render the hydrophobically modified cellulose ether to have less than 1% water solubility, the hydrophobic substitution group selected

Appl. No. 10/048,084  
 Atty. Docket No. AA414M  
 Amdt. dated September 17, 2003  
 Reply to Office Action of March 17, 2003

from a straight or branched chain alkyl group of from about 10 to about 22 carbons; wherein the ratio of the hydrophilic groups in the hydrophilic cellulose backbone to the hydrophobic substitution group being from about 2:1 to about 1000:1; from about 0.1% to about 15% of a high melting point fatty compound having a melting point of 25°C or higher; from about 0.1% to about 10% of a cationic conditioning agent having saturated alkyl groups; and an aqueous carrier; and from about 0.001% to about 5% of a cationic polymer selected from the group consisting of; a hydrophobically modified cationic cellulose having the following formula:



wherein  $R^1$  is an alkyl having from about 8 to about 22 carbons,  $n$  is an integer from 1 to about 10,000;  $x$  is 0 or an integer from 1 to about 6; and  $y$  is the level of cationic substitution from 0.1 to 1.0;

a copolymer of hydrophilic-cellulose units and diallyldimethyl ammonium chloride units wherein the ratio of the number of hydrophilic-cellulose units to the diallyldimethyl ammonium chloride units is from about 1:100 to about 10:1, and wherein the molecular weight of the copolymer is from about 10,000 to about 250,000; and mixtures thereof.

### 35 U.S.C. § 102(a)

Claims 1-3 and 8-14 are rejected under 35 U.S.C. § 102(a) as being anticipated by Mitsumatsu (WO 99/13833). Applicants respectfully traverse this rejection. In light of the claim amendments enclosed herewith, the Applicant respectfully submits that amended claims 1-3 and 8-14 are now novel over Mitsumatsu.

Claim 1 of the present invention, as now amended to more specifically define the invention, relates to a hair conditioning composition comprising: (a) a hydrophobically modified cellulose ether; (b) a high melting point fatty compound; (c) a cationic conditioning agent; (d) an aqueous carrier; and (e) a cationic polymer selected from the group consisting of a hydrophobically modified cationic cellulose, a copolymer of hydrophilic-cellulose and diallyldimethyl ammonium chloride units and mixtures thereof.

Claim 2 of the present invention, as now amended to more specifically define the invention, relates to a hair conditioning composition comprising (a) a hydrophobically modified

Appl. No. 10/048,084  
Atty. Docket No. AA414M  
Amdt. dated September 17, 2003  
Reply to Office Action of March 17, 2003

cellulose ether; (b) a high melting point fatty compound; (c) a cationic conditioning agent; (d) an aqueous carrier; and (e) polypropylene glycol.

Claim 3 of the present invention, as now amended to more specifically define the invention, relates to a hair conditioning composition comprising (b) a high melting point fatty compound; (c) a cationic conditioning agent comprising amidoamine and an acid; and (d) an aqueous carrier.

Mitsumatsu relates to a hair care composition containing a cationic compound. Mitsumatsu discloses compositions containing cetyl hydroxyethyl cellulose, high melting point fatty acids such as cetyl alcohol, lauryl methyl glueth-10 hydroxypropyl-dimonium chloride and polyquaternium-7 (described in Example 12) of polyquaternium -10 (described in Example 14). However, these polyquaterniums are not the specific cationic polymers, as required in Claim 1 of the present invention, as now amended. Thus, Mitsumatsu does not disclose the combination of hydrophobically modified cellulose ether, high melting point fatty acids, cationic conditioning agents, and the specific cationic polymers, as required in Claim 1 of the present invention. Furthermore, Mitsumatsu also does not disclose the combination of hydrophobically modified cellulose ethers, high melting point fatty acids, cationic conditioning agents, and polypropylene glycol, as required in Claim 2 of the present invention. Further, Mitsumatsu does not disclose the combination of hydrophobically modified cellulose ethers, high melting point fatty compounds, and cationic conditioning agents comprising amidoamines and acids, as required in Claim 3, as now amended, in the present invention.

**35 U.S.C. § 102(b)**

Claims 1-3 and 8-14 are rejected under 35 U.S.C. § 102(b) as being anticipated by either Coffindaffer et al. (WO 92/16187) or Murray (WO 95/24180). Applicants respectfully traverse this rejection. In light of the claim amendments enclosed herewith, the Applicant respectfully submits that amended claims 1-3 and 8-14 are now novel over either Coffindaffer et al or Murray.

Coffindaffer et al relates to cosmetic compositions containing hydrophobically modified nonionic polymers and unsaturated quaternary ammonium surfactants. Coffindaffer et al discloses hair styling rinse compositions containing hydrophobically modified nonionic celluloses, unstaruated quaternary ammonium surfactants, and high melting point fatty compounds such as cetyl alcohol (described in Examples). However, Coffindaffer et al does not disclose the specific cationic polymers nor polypropylene glycol, in combination with hydrophobically modified cellulose ethers, high melting point fatty compounds, and cationic conditioning agents, as now claimed in the present invention. Further, Coffindaffer et al does not disclose cationic conditioning agents comprising amidoamines an acids, in combination with

Appl. No. 10/048,084  
Atty. Docket No. AA414M  
Amdt. dated September 17, 2003  
Reply to Office Action of March 17, 2003

hydrophobically modified cellulose ethers and high melting point fatty compounds, as now claimed in the present invention.

Murray discloses hair conditioning compositions containing cetyl hydroxyethylcellulose, high melting point fatty compounds and cetyl trimethyl ammonium chloride in an aqueous carrier. However, Murray does not disclose the specific cationic polymers nor polypropylene glycol, in combination with hydrophobically modified cellulose ethers, high melting point fatty compounds, and cationic conditioning agents, as now claimed in the present invention. Further, Coffindaffer et al does not disclose cationic conditioning agents comprising amidoamines and acids, in combination with hydrophobically modified cellulose ethers and high melting point fatty compounds, as now claimed in the present invention.

In summary, none of the reference, Mitsumatsu, Coffindaffer et al or Murray, disclose hair conditioning compositions, as required in the amended Claims 1 -3 of the present invention. Thus, the amended Claims 1-3 are novel over Mitsumatsu, Coffindaffer et al or Murray. Further, Claims 8-14 are dependent on the amended Claim 1, and are thus also novel over Mitsumatsu, Coffindaffer et al or Murray.

**Rejection Under 35 USC 103(a) Over Mitsumatsu (WO 99/13833) and Murray (WO 95/24180)**

Claims 4 - 7 have been rejected under 35 USC 103(a) as being unpatentable over Mitsumatsu (WO 99/13833) and Claim 6 has been rejected as being unpatentable over Murray (WO 95/24180). Applicants respectfully traverse this rejection.

The present invention is directed to hair conditioning compositions for providing hair volume-up while not compromising basic conditioning benefits. The benefit of the present invention is due to the specific cationic polymers in combination with hydrophobically modified cellulose ethers, high melting point fatty compounds, and cationic conditioning agents; also due to the presence of polypropylene glycol in combination with hydrophobically modified cellulose ethers, high melting point fatty compounds, and cationic conditioning agents; and also due to the presence of cationic conditioning agents comprising amidoamines and acids, in combination with hydrophobically modified cellulose ethers and high melting point fatty compounds.

However, there is no description in either Mitsumatsu or Murray regarding the relationship between the combination of these specific materials and the benefit of providing hair volume-up while not compromising basic conditioning benefits. Thus there is no motivation in Mitsumatsu or Murray to use the specific cationic polymers in combination with hydrophobically

Appl. N . 10/048,084  
Atty. Docket No. AA414M  
Amdt. dated September 17, 2003  
Reply to Office Action of March 17, 2003

modified cellulose ethers, high melting point fatty compounds, and cationic conditioning agents. Further, no motivation in Mitsumatsu or Murray to use polypropylene glycol, in combination with hydrophobically modified cellulose ethers, high melting point fatty compounds, and cationic conditioning agents. And finally, no motivation in Mitsumatsu or Murray to use cationic conditioning agents comprising amidoamines and acids, in combination with hydrophobically modified cellulose ethers and high melting point fatty compounds.

In order to establish a *prima facie* cast of obviousness, the Examiner must show that (1) there is some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, (2) there is a reasonable expectation of success, and (3) all of the limitations of the claims are taught or suggested in the prior art (M.P.E.P. § 2143). In the present case, and with respect to Claims 4-7, the Examiner has not provided the requisite motivation to modify either Mitsumatsu or Murray so as to obtain Applicants' invention. Unlike Applicants, Mitsumatsu or Murray do not recognize the volume-up benefit, while not compromising basic conditioning benefits, of Applicants' combination of components. Applicants disclose a "volume-up conditioning system" wherein Applicants recognize the interactions of the components of such a system.

In summary, neither Mitsumatsu or Murray establish a *prima facie* case of obviousness because there is no suggestion or motivation to modify the references. Second, even if a *prima facie* case was established, the obviousness argument is overcome by Applicants' showing of unexpected results, i.e. providing surprising hair volume-up benefits while not compromising basic conditioning benefits. Therefore, Applicants' content that the claimed invention is unobvious and that the rejection should be withdrawn.

#### Conclusion

In light of the above remarks, it is requested that the Examiner reconsider and withdraw the rejection under 35 U.S.C. 102(a), 102(b) and 103(a). Early and favorable action in the case is respectfully requested.

Applicants have made an earnest effort to place their application in proper form and to distinguish the invention as now claimed from the applied references. In view of the foregoing, Applicants respectfully request reconsideration of this application, entry of the amendments presented herein, and allowance of Claims 1-14.

Appl. No. 10/048,084  
Atty. Docket No. AA414M  
Amdt. dated September 17, 2003  
Reply to Office Action of March 17, 2003

Respectfully submitted,

Ananathanarayan Venkateswaran et al

By Linda M Sivik  
Linda M. Sivik  
Agent for Applicant(s)  
Registration No. 44,982  
(513) 626-4122

September 17, 2003  
Customer No. 27752